

Claims

1. A $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts of omeprazole and of esomeprazole, wherein R_1 is a linear, branched $\text{C}_1\text{-C}_{12}$ -alkyl group, or a cyclic $\text{C}_3\text{-C}_{12}$ -alkyl; wherein the linear or branched alkyl group may be substituted or interrupted with a cyclic $\text{C}_3\text{-C}_6$ -alkyl or alkylene group or with a phenyl or phenylene group; and wherein the cyclic alkyl or alkylene group or the phenyl or phenylene group is further substituted by 0, 1, 2, 3 methyl groups; and R_2 and R_3 are hydrogen.
- 10 2. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts of omeprazole and of esomeprazole according to claim 1 wherein the R_1 is selected from linear, branched or cyclic $\text{C}_1\text{-C}_6$ -alkyl group wherein the linear or branched alkyl group may be substituted or interrupted with a cyclic $\text{C}_3\text{-C}_5$ -alkyl or alkylene group or with a phenyl or phenylene group; and wherein the cyclic alkyl or alkylene group or the phenyl or phenylene group is further substituted by 0, 1, 2, 3 methyl groups.
- 15 3. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts of omeprazole and of esomeprazole according to any of claims 1 or 2 wherein the R_1 is selected from linear, branched or cyclic C_4 -alkyl group wherein the linear or branched alkyl group may be substituted or interrupted with a cyclic C_3 -alkyl or alkylene group; and wherein the cyclic alkyl or alkylene group is further substituted by 0, 1, 2, 3 methyl groups.
- 20 4. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts of omeprazole and of esomeprazole according to any of claims 1 or 3 wherein $\text{NHR}_1\text{R}_2\text{R}_3^+$ has a pKa value equal or above 10.
- 25 5. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts of omeprazole and of esomeprazole according to any of claims 1 or 4 wherein $\text{NHR}_1\text{R}_2\text{R}_3^+$ has a pKa value equal or above 10.5.
- 30 6. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts according to any of claims 1 to 5 characterized in that it is the $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of omeprazole.

7. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts according to any of claims 1 to 5 characterized in that it is the $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of esomeprazole.

5 8. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts according to claim 6 characterized in that it is the *tert*-butylammoniumsalt of omeprazole.

9. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts according to claim 7 characterized in that it is the *tert*-butylammoniumsalt of esomeprazole.

10 10. The $\text{NHR}_1\text{R}_2\text{R}_3^+$ salts according to any of the claims 1 to 9 characterized in that the compound is crystalline.

15 11. A process for preparation of a $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of omeprazole and of esomeprazole, according to any of claims 1 to 10, which comprises the following steps:

- a) dissolving omeprazole or esomeprazole in an organic solvent;
- b) adding a $\text{NR}_1\text{R}_2\text{R}_3$ -compound and precipitating the desired salt;
- c) isolating and drying of the obtained salt of omeprazole or esomeprazole.

20 12. The process according to claim 11 wherein the organic solvent is acetonitril or *tert*-butyl methyl ether.

25 13. The process according to any of claims 11 and 12 wherein a $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of omeprazole is obtained.

14. The process according to any of claims 11 and 12 wherein a $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of esomeprazole is obtained.

15. A pharmaceutical composition comprising the $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of omeprazole or esomeprazole according to any of claims 1 to 10 as active ingredients in association with pharmaceutically acceptable excipients and optionally other therapeutic ingredients.

5 16. Use of the $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of omeprazole or esomeprazole according to any of claims 1 to 10 for the manufacture of a medicament for use in the treatment of gastric acid related condition.

10 17. A method for treatment of a gastric acid related condition which method comprised administering to a subject suffering from said condition a therapeutically effective amount of the $\text{NHR}_1\text{R}_2\text{R}_3^+$ salt of omeprazole or esomeprazole according to any of claims 1 to 10.